

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for the production of propylene comprising ~~starting from mixtures of hydrocarbons, prevalently olefins, the above hydrocarbons having a boiling point ranging from -15°C to +80°C, which comprises putting the above mixture of hydrocarbons in contact, under cracking conditions, with a large pore zeolite having a molar ratio Silica/Alumina lower than 200~~ contacting a mixture of hydrocarbons with a catalyst composition, and

wherein the mixture of hydrocarbons comprises predominately olefins, and wherein the mixture has a boiling point ranging from -15°C to +80°C, and

wherein the catalyst composition comprises a large pore zeolite comprising a lattice of 12 tetrahedrons, and wherein the zeolite has a molar ratio of silica/alumina from 100 to 200.

Claim 2 (Currently Amended): The process according to claim 1, ~~characterized in that~~ wherein the mixture of hydrocarbons has a boiling point ranging from -12°C to +60°C.

Claim 3 (Currently Amended): The process according to claim 1, ~~characterized in that~~ wherein the zeolite is a ZSM-12 zeolite.

Claim 4 (Currently Amended): The process according to claim 3, ~~characterized in that~~ wherein the ZSM-12 zeolite has a molar ratio ~~Silica/Alumina~~ silica/alumina ranging from ~~50~~ 100 to 150.

Claim 5 (Currently Amended): The process according to claim 1, ~~characterized in that~~ wherein the mixture of hydrocarbons comprises from 30% to 100% by weight of olefins.

Claim 6 (Currently Amended): The process according to claim 5, ~~characterized in that~~ wherein the mixture of hydrocarbons has a content of 40% to 85% by weight of olefins.

Claim 7 (Currently Amended): The process according to claim 1, ~~characterized in that~~ wherein the process is carried out at a temperature ranging from 400°C to 750°C.

Claim 8 (Currently Amended): The process according to claim 7, ~~characterized in that~~ wherein the temperature ranges from 450°C to 700°C.

Claim 9 (Currently Amended): The process according to claim 8, ~~characterized in that~~ wherein the temperature ranges from 500°C to 650°C.

Claim 10 (Currently Amended): The process according to claim 1, ~~characterized in that it~~ wherein the process is carried out at a weight hourly space velocity (WHSV) ranging from 0.1 h⁻¹ to 1,000 h⁻¹.

Claim 11 (Currently Amended): The process according to claim 10, ~~characterized in that~~ wherein the weight hourly space velocity ranges from 0.5 h⁻¹ to 100 h⁻¹.

Claim 12 (Currently Amended): The process according to claim 11, ~~characterized in that~~ wherein the weight hourly space velocity ranges from 0.8 h⁻¹ to 50 h⁻¹.

Claim 13 (New): The process according to claim 1, wherein the zeolite has a molar ratio of silica/alumina ranging from 150 to 200.

Claim 14 (New): The process according to claim 1, wherein the zeolite has a molar ratio of silica/alumina of 100.

Claim 15 (New): The process according to claim 1, wherein the zeolite has a residual sodium content of less than 50 ppm.

Claim 16 (New): The process according to claim 1, wherein the zeolite is in its acid form.

Claim 17 (New): The process according to claim 1, wherein the catalyst composition maintains catalytic activity for 25 hours or more.

Claim 18 (New): The process according to claim 1, wherein the catalyst composition maintains approximately the same level of conversion for 25 hours or more.

Claim 19 (New): The process according to claim 1, wherein the catalyst composition maintains catalytic activity and maintains approximately the same level of conversion, both for 25 hours or more.

Claim 20 (New): A process for the production of propylene comprising contacting a mixture of hydrocarbons with a catalyst composition, and

wherein the mixture of hydrocarbons comprises predominately olefins, and wherein the mixture has a boiling point ranging from -15°C to +80°C, and

wherein the catalyst composition comprises a large pore zeolite comprising a lattice of 12 tetrahedrons, and wherein the zeolite has a molar ratio of silica/alumina less than 200; and

wherein the zeolite is prepared by the steps comprising:

contacting sodium aluminate with an aqueous solution of tetramethyammonium hydroxide to form a mixture,

contacting the mixture with colloidal silica to form a homogeneous gel,

crystallizing the gel under hydrothermal conditions to obtain a first solid,

washing the first solid with water to form a second solid,

calcining the second solid in air to form a calcined solid,

subjecting the calcined solid to an ion exchange using an aqueous solution of ammonium acetate to form a third solid, and

calcining the third solid in air.